

RELIABILITY AND PERFORMANCE SOLUTIONS is based on demonstrated knowledge and proven experience. It is published by RJM Corporation for executives and operations personnel to provide information for improving reliability, maximizing performance, and increasing return on capital investment.



BURNER-WINDBOX AIR DISTRIBUTION ANALYSIS

RELIABILITY AND PERFORMANCE SOLUTIONS

New Method Cuts Time and Cost of Air Distribution Analysis

Poor burner-windbox air distribution is a common problem - and a costly one, too. Now there's an innovative technology for air distribution analysis that cuts time and costs - and increases accuracy at the same time.

RJM's proprietary air distribution analysis is a superior technique when compared to physical or computer models. Why? Because the analysis technique uses actual data taken on your unit, rather than information drawn from simulated conditions. Real data greatly improves prospects for complete problem solving.

The investigation and response cycle of less than one week means quicker fixes and faster returns to optimum operation. If immediate corrective action or faster response is required, preliminary data analysis can be performed in the field.

Accurate Identification of Operational Problems

Use this RJM technology to correct classic burner-windbox airflow problems such as:

- **O₂ imbalances**
- **furnace gas flow imbalance**
- **high excess air levels**
- **high fly ash carbon levels**
- **high CO readings at normal excess air levels**
- **slagging "eyebrows" on burners**
- **chronic problems with flame impingement on tubes**

Also employ RJM's method of analysis to monitor furnace performance. For example, it's an inexpensive way to determine airflow balance when combustion units are being optimized for SO_x and NO_x control.

How the Analysis Works

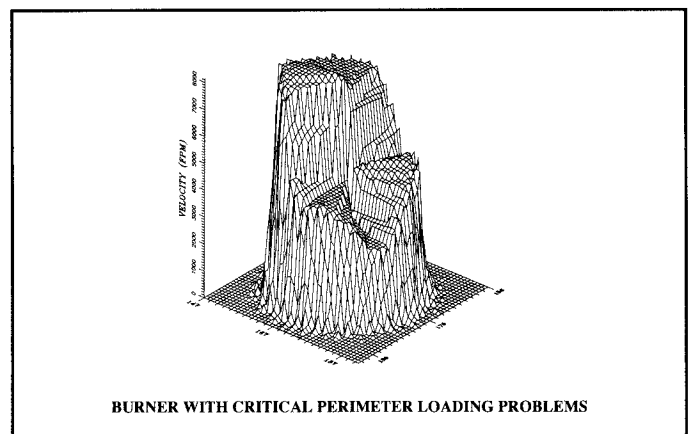
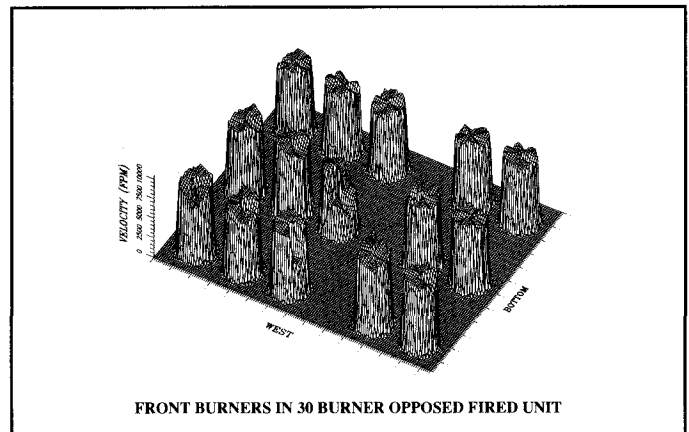
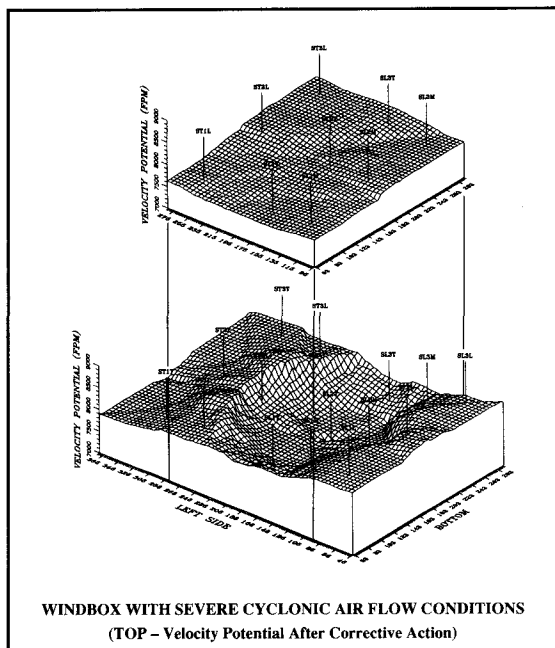
The RJM analysis technique uses a temperature compensated velocity probe inserted through a port on the burner-axis to measure burner-perimeter velocity loadings. On dual fuel or oil-fired units, access is through the oil atomizer jacket tube. RJM's method can be used on virtually all combustion units; the only requirement is that the axis of each burner be accessible to the probe through a scanner port, an oil atomizer jacket tube, or a sight port.

Report Documentation

After the field testing, RJM will provide recommended solutions for combustion problems, as well as full documentation, including:

- **three dimensional projections for each burner**
- **a composite three dimensional projection for all burners**
- **windbox velocity potential profiles**
- **calculated burner deviations from required airflow**
- **individual burner perimeter loading deviations**
- **tabulated data flagged for easy evaluation**

Graphics Make the Problems Visible



WHAT SHOULD YOU DO?

Call us. We are always happy to discuss your project. Ask us for our references – we are proud of our capabilities and expertise, and we will gladly send you a list of clients who have benefited from this and many of our other unique combustion services. Finally, try us.

Call us at (203) 438 6198

RJM Corporation
Ten Roberts Lane
Ridgefield CT 06877
Or call (203) 438-6198

REQUEST FOR ADDITIONAL INFORMATION

YES Please have a technical consultant call me:

Station and Unit Name _____ I can be reached at: () _____

The best time to call is: _____ am pm

Description of Problem:

I am interested to learn more about the following RJM Services:

- | | |
|---|---|
| <input type="checkbox"/> Air Flow Balancing | <input type="checkbox"/> Coal Flame Stabilizers |
| <input type="checkbox"/> Low NO _x Oil Atomizer | <input type="checkbox"/> On-Site Diagnostics |
| <input type="checkbox"/> Oil Atomizer Optimization | <input type="checkbox"/> Reliability Programs |
| <input type="checkbox"/> Fuel Balancing | <input type="checkbox"/> Heat Rate Improvement Programs |
| <input type="checkbox"/> NO _x Reduction Programs | |

NAME: (If not on mailing label) _____

(Please remove mailing label and place here;
make necessary address corrections.)

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JOIN OUR LIST OF SATISFIED CLIENTS

MARINE

Bay Tankers, British Petroleum, International Marine Industries, Keystone Shipping, Marine Transport Lines, Matson Lines, Sea Land Services, SOHIO, Todd Combustion.

INDUSTRIAL

Alco Industries, Amherbelle Corporation, Anderson 2000, Inc., A.N. Pierson Corporation, APTEC/CMST, Arkwright Finishing, Atlantic Sugar Association, Badger Paper Mills, Beall Manufacturing, Berol Corporation, Bradford Dyeing Association, Brown Company Industrial, Carter-Day Industries, CEA Combustion, Inc., CE Environmental, D'Addario Industries, Eastern Fine Paper, Inc., Encotech, Inc., Environmental Waste Resources, Eveready Battery Company, Ferosus Corporation, Frontier Chemical, Fuel Tech, Inc., Garden State Paper, Gulf & Western, Hollingsworth & Vose, Hukill Chemical, Hydro-Co Enterprises, Hydroflow Technologies, Lincoln Pulp & Paper, Martin Disposables, Pfizer Chemical Corporation, PRECO Corporation, Providence Metallizing, Safety-Kleen Corporation, Simkins Industries, Solvents Recovery Service of NJ, Sprague Energy, Stamford Testing, Todd Combustion, Union Carbide, United Industrial, Universal Process, Inc., Wausau Paper Mills, Inc., Zierick Manufacturing.

UTILITY

Atlantic Electric, Babcock & Wilcox, Boston Edison, Central Hudson Gas & Electric, Consolidated Edison, Dayton Power & Light, Eastmount Engineering, El Paso Electric, Houston Lighting and Power, Intermountain Power Service Corporation, Jacksonville Electric, LFC Power Systems, Los Angeles Department of Water and Power, Lower Colorado River Authority, Massey Coal, Montaup Electric Company, Nebraska Public Power District, New England Electric System, New England Power Service, Niagara Mohawk Power Corporation, Northeast Utilities, Northern Indiana Public Service Company, Ohio Power, Oklahoma Gas & Electric, Omaha Public Power, Pacific Gas & Electric, Public Service Company of Colorado, Public Service of Oklahoma, R-C Environmental Services, Seminole Electric, Southern California Edison, Southwestern Electric Power, Stone & Webster, Texas Utilities, Wallingford Electric, Western Farmers Electric Co-op, West Texas Utilities.

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